

CLAIMS:

1. A method for organizing the topology of a network with a multiplicity of stations grouped in clusters,
with the following steps:
provision of a system of rules that define the arrangement of stations in
5 clusters;
classification of the stations into one or more categories in accordance with the rules and arrangement of the stations in clusters on the basis of this classification;
determination of changes affecting the topology of the network;
adaptation, taking account of the rules, of at least the arrangement of the
10 stations in clusters on the basis of the changes;
characterized in that:
a multiplicity of permitted topology changes of the network are pre-defined;
at least one of the input variables for the rules is coded by fuzzy logic, dual
logic or other logic; and
15 at least one of the rules generates at least one output variable from coded input variables as a function of the changes affecting the topology of the network;
each of said output variables being a decision variable for a permitted network topology change to be made.
- 20 2. A method as claimed in claim 1, characterized in that at least one input variable is fuzzy-coded.
3. A method as claimed in claim 1, characterized in that the network topology change is:
25 - the creation of a cluster,
- the deletion of a cluster,
- the shifting of a cluster, or
- the cluster change of a station.

4. A method as claimed in claim 2 or 3, characterized in that the fuzzy-coded input variable is a linguistic variable.

5. A method as claimed in one of the claims 1 to 4, characterized in that at least one of the rules is of the Mamdani type.

6. A network with a multiplicity of stations which are grouped in clusters, with: a memory device in at least one of the stations in which a system of rules defining the arrangement of stations in clusters is stored;

10 a device for classifying the stations into one or more categories in accordance with the rules, and for arranging the stations in clusters on the basis of the classification;

a device for determining changes affecting the topology of the network; and

a device for adapting at least the arrangement of the stations in clusters on the basis of the changes while, observing the rules;

15 characterized in that:

a multiplicity of permitted network topology changes is stored in the memory device;

a device is provided for coding at least one of the input variables for the rules in accordance with fuzzy logic, dual logic or other logic;

20 wherein at least one of the rules generates at least one output variable from coded input variables as a function of the changes affecting the topology of the network, and each of these output variables is a decision variable for a permitted network topology change to be made.

25 7. A network as claimed in claim 6, characterized in that the device for coding operates with fuzzy logic.

8. A network as claimed in claim 6, characterized in that every cluster includes a central controller, which is a station of the network, wherein the controller itself executes at least the topology changes relating to its existence and/or function.

30 9. A network as claimed in claim 8, characterized in that at least one station is provided as a forwarder which participates in the communication of two clusters, wherein the network permits the following as additional topology changes:

- creation of a forwarder;
- deletion of a forwarder;
- transfer of the forwarder function to a different station.

5 10. The use of a method as claimed in one of the claims 1 to 5 in conventional data analysis, wherein the stations are the objects of the data analysis.